

wherein R_1 is a hydrogen atom or methyl, R_2 is an acid-labile tertiary alkyl group, and $m/(m+n)$ is 0.5 to 0.8; and

(b) a photoacid generator (PAG).

REMARKS

Summary

By this Amendment, Claims 1 and 5 have been revised, and no other claims have been added to or deleted from the application.

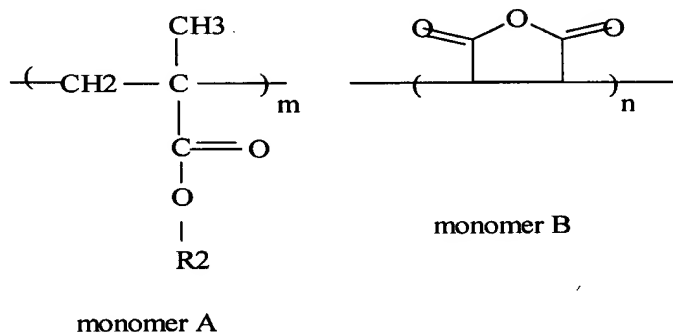
Accordingly, Claims 1-18 remain pending in the application.

35 U.S.C. ¶102 and ¶103 – Fujishima et al.

Claims 1-13 and 15-18 were rejected under 35 U.S.C. ¶102 or ¶103 as being unpatentable over Fujishima et al. (US 6239231), taken alone or in combination with Hosaka et al. (US 5405720), for the reasons stated at pages 2-6 of the Office Action. Applicants respectfully request reconsideration of this rejection with respect to the now-pending claims.

One aspect of the present invention resides in the provision of a resist composition which is relative inexpensive to fabricate, yet which exhibits sufficiently increased resistance to dry etching and improved adhesion to underlying layers. Such a resist composition is achieved by the novel

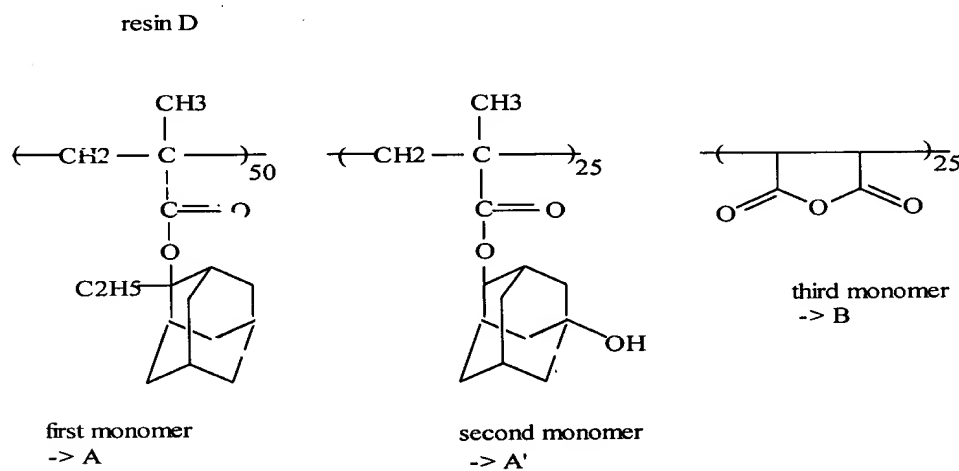
photosensitive copolymer of the present invention, which consist essentially of first and second monomers A and B represented by the following formulae:

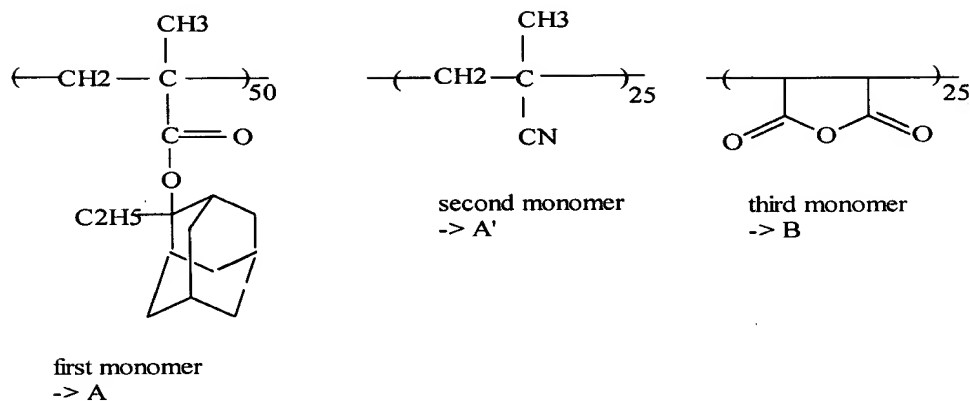


where R1 is CH₃.

Although the copolymer may of course contain impurities or the like, the copolymer consist essentially of monomers A and B, whereby repeating structures such as A-B-A-B... or A-A-A-B-B-B... etc., are defined.

In contrast, the resins D and E of Fushijima et al. are terpolymers containing three monomers A, A' and B as follows:





The terpolymer of Fujishima et al. necessarily contains the three monomers A, A' and B, to thereby define repeating structures such as A-A'-B-A-A'-B ... or A-A'-A-A'-B-B... etc. The monomer A' is a necessary component of the terpolymer of Fujishima et al., and it would not be obvious to somehow eliminate the monomer A' from the terpolymer of Fujishima et al.

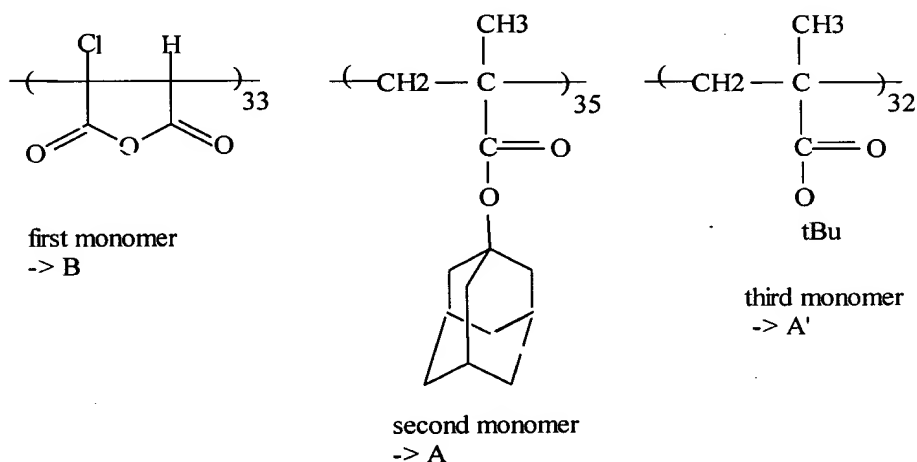
For *at least* the reasons stated above, Applicants respectfully contend that Claims 1-13 and 15-18 define over the teachings of Fujishima et al., taken alone or in combination with Hosaka et al.

35 U.S.C. ¶102 and ¶103 – Asakawa et al.

Claims 1-3, 5-7 and 9-14 were rejected under 35 U.S.C. ¶102 or ¶103 as being unpatentable over Asakawa et al. (US 6280897), taken alone or in combination with Kinsho et al. (US 6312867), for the reasons stated at pages 4-

7 of the Office Action. Applicants respectfully request reconsideration of this rejection with respect to the now-pending claims.

Applicants grounds for traversal of this rejection are essentially the same as those presented in response to the rejection based on Fujishima et al. That is, the invention of the rejected claims is directed to a copolymer (or a resist composition containing a copolymer) which consist essentially of the first and second monomers identified above. In contrast, the polymer PP-4 of Asakawa et al. is a terpolymer containing three monomers A, A' and B as follows:



Again, the monomer A' is a necessary component of the terpolymer of Asakawa et al., and it would not be obvious to somehow eliminate the monomer A' from the terpolymer of Asakawa et al.

For *at least* the reasons stated above, Applicants respectfully contend that Claims 1-13 and 15-18 define over the teachings of Asakawa et al., taken alone or in combination with Kinsho et al.


Conclusion

No other issues remaining, reconsideration and favorable action upon the Claims 1-18 now-pending in the application are requested.

Respectfully submitted,

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By:



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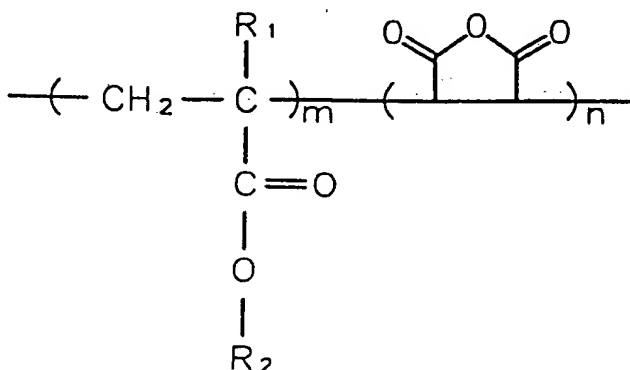
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ATTACHMENT "A"

Additions/Deletions to the Claims:

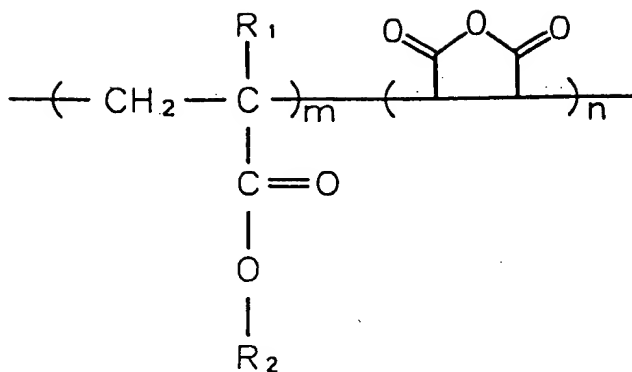
1. (Amended) A photosensitive copolymer having a weight-average molecular weight of 3,000 to 100,000 and consisting essentially of first and second monomers represented by the following formulae:



wherein R_1 is a hydrogen atom or methyl, R_2 is an acid-labile tertiary alkyl group, and $m/(m+n)$ is 0.5 to 0.8.

5. A resist composition comprising:

(a) a photosensitive copolymer having a weight-average molecular weight of 3,000 to 100,000 and consisting essentially of first and second monomers represented by the following formulae:



wherein R₁ is a hydrogen atom or methyl, R₂ is an acid-labile tertiary alkyl group, and m/(m+n) is 0.5 to 0.8; and

(b) a photoacid generator (PAG).